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**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/013,541 01/26/98 LINNARTZ

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LM02/0504

EXAMINER

MEISLAHN, D

ART UNIT

PAPER NUMBER

2767

DATE MAILED:

05/04/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/013,541

Applicant(s)

Linnartz

Examiner  
Douglas Meislahn

Group Art Unit  
2767



☒ Responsive to communication(s) filed on Mar 6, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-18 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-18 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on Mar 6, 2000 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 14

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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## **DETAILED ACTION**

### ***Response to Amendment***

1. This action is in response to the amendments filed 06 and 13 March 2000 that added claim 18, amended claims 1-17 and the specification, and submitted drawing corrections.

### ***Response to Arguments***

2. Applicant's arguments filed 06 March 2000 have been fully considered but they are not persuasive. Applicant argues that the examiner has not shown "an information carrier having a medium mark representing a first bitpattern." The examiner points to his discussion of Narasimhalu et al. Generator means are inherent in the examiner's mentioning of the transformation of medium marks into digital signatures. Cox et al. teach encoder means for embedding watermarks in information. Some confusion might have arisen from the interchangeability of the terms "digital signature" and "watermark." Using these terms as synonyms is appropriate because both digital signatures and watermarks are both derived from the data with which they are to be used and are generally reliant on hash functions.

With respect to claim 4, applicant's argument is unpersuasive because identifying an owner renders obvious identifying that owner's apparatus, which in this case is the encoder. As has been mentioned before, Narasimhalu et al. teach digital signatures and the encoder means. Since the encoder creates the digital signature, the signature

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should identify the encoder. Cox et al. is used in this case to teach the advantage of Narasimhalu et al.'s invention.

3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the use of the watermark in claim 9, and "introducing artificial indica or requiring a special hardware subsystem for achieving copy protection") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

4. Applicant's arguments with respect to claim 10 are not persuasive because any mention of a digital watermark anticipates unique identification of the data to which the watermark is applied unless the reference mentioning the watermark specifically states that the watermark is not meant to uniquely identify the data to which it is applied. It should also be noted that the last sentence of Cox et al.'s abstract talks about using original data to generate a watermark.

5. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

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*Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both *Narasimhalu et al.* and *Cox et al.* are directed to methods of protecting data.

6. Applicant's arguments with respect to claims 2, 3, 12, and 13 are unpersuasive because *Schneier* is directed to a method of identifying data, which is the focus of both *Narasimhalu et al.* and *Cox et al.*

7. Applicant's arguments with respect to claims 6-8 and 15 have ignored the examiner's taking of official notice.

***Claim Rejections - 35 USC § 101***

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 9 and 10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As was mentioned in the previous office action, data on a disk is not statutory unless that data is a data structure. A data structure causes a processor to manipulate data in a specific way. This definition is based upon *In re Lowry*. Please see MPEP 2106 IV B. 1. (b).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 1, 4, 5, 9-11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narasimhalu et al. and Cox et al.

In their abstract, Narasimhalu et al. teach a method of identifying marks on a recording medium and using these marks, which are unique to the medium, to form digital signature which in turn encrypts data. A digital representation of the marks on the recording medium, which would correspond to the present invention's first bitpattern, is necessary in order to form the digital signature, which corresponds to the second bitpattern. Narasimhalu et al. do not say that the digital signature is used as a watermark. Cox et al. teach that watermarks are useful in tracking distribution and representation in lines 24-27 of column 1. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the digital signature of Narasimhalu et al. not only as an encryption key but also as a watermark in order to gain the tracking advantages taught by Cox et al. Cox et al. teach many forms of data in the third paragraph of the first column, video being one of them. Video requires a player and recorder. Furthermore, watermarks gain their use by being used, and therefore Cox et al. renders relationship verification obvious.

In lines 16-17 of their second column, Cox et al. say that an effective watermark unambiguously identifies the owner. This renders obvious applicant's fourth claim and the ones similar to it.

With respect to claim 18, the medium mark is a result of the manufacture of a disk, and without any further limitations to "written" is thus considered to be written to the disk

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during manufacture. The disk of Narasimhalu et al. can be considered to be a master disk.

11. Claims 2-3, 12-14, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narasimhalu et al. in view of Cox et al. as applied to claim 1 above, and further in view of Schneier (*Applied Cryptography*).

Narasimhalu et al. and Cox et al. show a method of using characteristics of a medium in order to create a watermark for the data stored on the medium. They do not say that the characteristics and the watermark are related by a one-way hash function. On page 459, Schneier shows a one-way hash of a message and a key. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to create the watermark by using a one-way hash function on the representation of the medium's characteristics, as taught by Schneier.

12. Claims 6-8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narasimhalu et al. in view of Cox et al. and Schneier as applied to claim 5 above.

Narasimhalu et al. in view of Cox et al. and Schneier teach a method of using characteristics of a medium and a one-way hash function in order to create a watermark for the data stored on the medium. Schneier clearly shows the hash as containing two parts: a key and the message. The key corresponds to the seed of applicant's claims. Narasimhalu et al. say in their abstract that the watermark can be made of any nonuniformities or uniformities at any level. This includes the level of machine-made marks. There is no mention of marking the medium and using that as the characteristic.

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Official notice is taken that it is old and well-known to mark data mediums in order to instill them with useful information. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a machine-made mark as the basis for the watermark so that the watermark would relate to information pertinent to the data storage medium.

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J Meislahn whose telephone number is (703)



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305-1338. The examiner can normally be reached between 9AM - 6PM, except for every other Friday.

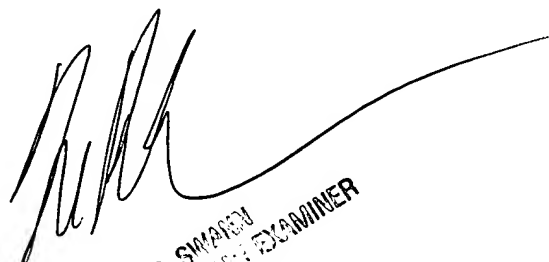
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tod Swann can be reached on (703) 308-7791. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-9051 for regular communications and (703) 308-9052 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Douglas J Meislahn  
Examiner  
Art Unit 2767

DJM  
DJM

April 27, 2000

  
TOD R. SWANN  
SUPERVISING EXAMINER